

**Abstract of the Disclosure**

A precoding system to achieve rates higher than 33.6 kbps in the analog modem to digital modem direction. The precoding system modifies the standard THP algorithm to adapt it for use in PCM modems. Instead of an arithmetic modulo operation that is implemented in the transmitter, the invention defines a Discrete Modulo Operation as a function of the constellation of levels chosen. This operation performs the function of limiting the amplitude of the transmitted signal.